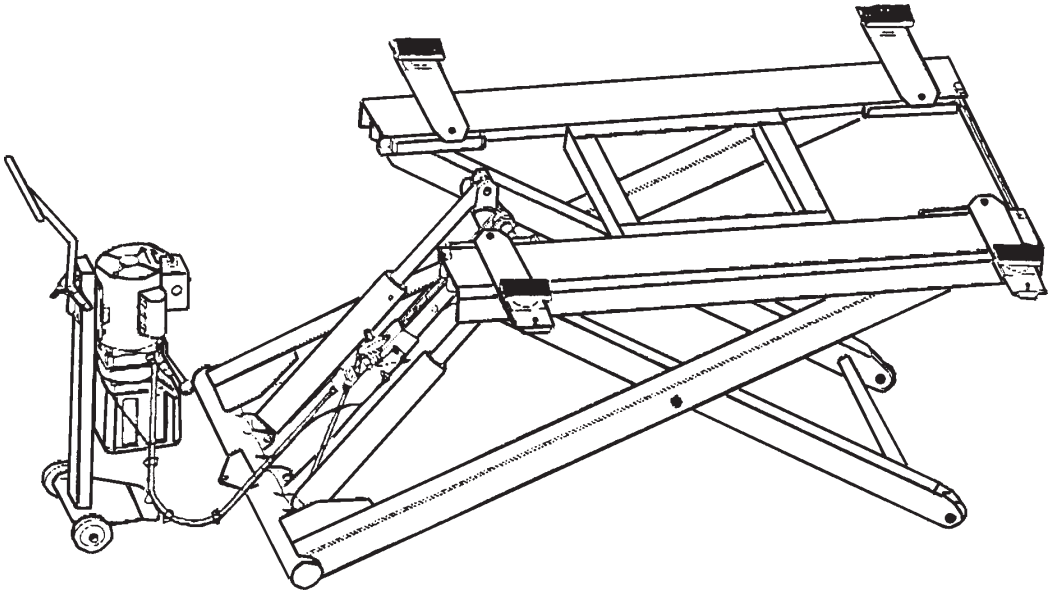
Central Hydraulics®

MID-HIGH CAR LIFT WITH HYDRAULIC PUMP 6,000 POUND CAPACITY

Model 46604

ASSEMBLY AND OPERATING INSTRUCTIONS



Visit our website at: http://www.harborfreight.com

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

Copyright© 2002 by Harbor Freight Tools®. All rights reserved. No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

For technical questions or replacement parts, please call 1-800-444-3353.

Revised Manual 10f

SPECIFICATIONS TABLE

Maximum Lift Capacity	6,000 Lb. at 19” Elevation
Electrical Requirements	220 V~/60 Hz/4 A/ 1 HP Motor/Single Phase Motor RPM: 3,450
Pump Maximum PSI	3,200 PSI
Pump Hydraulic Oil Capacity/Type	1.5 Gallons ISO VG 32 Hydraulic Oil (Extreme temperature conditions may require an oil with a different viscosity – consult a qualified technician.)
Maximum Ram Force	25,000 PSI
Minimum Height	3-7/8” at Top of Plate 7” at Top of Rubber Saddle
Maximum Height	39-3/4” at Top of Rubber Saddle
Maximum Width Between Rubber Saddles	53”
Rubber Saddle Dimensions	5-1/8” x 3-1/2”
Ram	1.50” Diameter
Ram Cylinder	2.55” Diameter
Ram Travel	13.5”
Plate Travel	33.5”
Overall Dimensions	79” L x 39-1/2” W x 39-3/4” H (Up) 85-1/2” L x 39-1/2” W x 7” H (Down)
Weight	752 Pounds

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

1. **KEEP WORK AREA CLEAN AND DRY.** Cluttered, damp, or wet work areas invite injuries.

2. **KEEP CHILDREN AWAY FROM WORK AREA.** Do not allow children to handle this product.

3. **STORE IDLE EQUIPMENT.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment, and keep out of reach of children.

4. **DO NOT USE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.

5. **USE EYE AND HAND PROTECTION.** Wear ANSI approved safety impact eyeglasses and heavy-duty work gloves when using this product. ANSI approved safety impact eyeglasses and heavy-duty work gloves are available from Harbor Freight Tools.

6. **DRESS SAFELY.** Do not wear loose clothing or jewelry, as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.

7. **DO NOT OVERREACH.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.

8. **INDUSTRIAL APPLICATIONS MUST FOLLOW OSHA REQUIREMENT.**

9. **STAY ALERT.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired of distracted from the job at hand.

10. **CHECK FOR DAMAGED PARTS.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.

11. **REPLACEMENT PARTS AND ACCESSORIES:** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.

12. **MAINTAIN THIS PRODUCT WITH CARE.** Keep this product clean and dry for better and safer performance.

13. **MAINTENANCE:** For your safety, service and maintenance should be performed regularly by a qualified technician.

14. **USE THE RIGHT PRODUCT FOR THE RIGHT JOB.** There are certain applications for which this product was designed. Do not use small equipment, tools, or attachments to do the work of larger industrial equipment, tools, or attachments. Do not use this product for a purpose for which it was not intended.

15. **WARNING:** The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.

SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

1. **DO NOT EXCEED THE MAXIMUM LIFT CAPACITY (6,000 POUNDS AT 19" ELEVATION) FOR THE CAR LIFT.** Overloading the Car Lift could cause personal injury and/or property damage. **Caution:** Be aware of dynamic loading! If a weight falls onto the Car Lift, it may create for a brief instant an excess load, which may result in damage to vehicle, Car Lift and/or personal injury.

2. **OPERATION (RAISING OR LOWERING) OF THE CAR LIFT CAN BE IMMEDIATELY STOPPED AT ANY TIME BY RELEASING PRESSURE ON THE POWER SWITCH LOCATED ON THE MOTOR (part #1A). (See Figure B, and Assy. Diagram A.)**

3. **DO NOT USE THE CAR LIFT ON ANY ASPHALT SURFACE.** Make sure this equipment is used on a dry, oil/grease free, flat, level, **CONCRETE** surface capable of supporting the weight of the Car Lift, the vehicle being lifted, and any additional tools and equipment. The concrete floor should have a minimum thickness of 5". The concrete must have a minimum strength of 4,000 PSI, and should be aged at least 30 days prior to use. Do not use the Car Lift on concrete expansion seams or on cracked, defective concrete.

4. **ALWAYS EXAMINE THE CAR LIFT FOR STRUCTURAL CRACKS, BENDS, DAMAGE TO THE HYDRAULIC HOSES AND ELECTRICAL WIRING, AND ANY OTHER CONDITION THAT MAY AFFECT THE SAFE OPERATION OF THE LIFT.** Do not use the Car Lift even if minor damage appears.

5. **MAKE SURE THE OIL TANK (part #12A) IS COMPLETELY FILLED WITH A PREMIUM QUALITY HYDRAULIC OIL PRIOR TO OPERATING THE CAR LIFT. (See Figure B, Assy. Diagram A, and the "INSPECTION, MAINTENANCE, AND CLEANING" section.) Note: The hydraulic tank oil capacity is 1.5 gallons.**

6. **MAINTAIN A SAFE WORKING ENVIRONMENT.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use the Car Lift in areas near flammable chemicals, dusts, and vapors.

7. **PRIOR TO BEGINNING A JOB, MAKE SURE THE SAFETY LOCK ASSEMBLY (part #36B) AND ITS SAFETY CATCHES ARE IN THE PROPER POSITION.** NEVER work underneath a vehicle without using additional safety support devices (i.e., jack stands) to support the vehicle. **(See Figure A, and Assy. Diagram B.)**

8. **ALWAYS KEEP HANDS, FINGERS, AND FEET AWAY FROM THE MOVING PARTS OF THE CAR LIFT WHEN APPLYING OR RELEASING A LOAD.** Remain clear of the Car Lift when raising or lowering a vehicle.

9. **USE EXTREME CAUTION WHEN APPLYING OR RELEASING A LOAD.** Never allow the load to suddenly release. Slowly and carefully apply and release the load.

10. **NEVER LEAVE THE CAR LIFT UNATTENDED WHEN THE LIFT IS UNDER A LOAD.** Whenever the Car Lift is under a load there is a very large amount of force that has been stored in the Outside/Inside Scissors (parts #24B, #25B) which must be controlled until the load is relaxed. **(See Assy. Diagram B.)**

11. **BEFORE DRIVING A VEHICLE ONTO THE CAR LIFT, MAKE SURE THE LIFT IS FULLY LOWERED.** Before driving a vehicle onto the Car Lift, position the Plates (part #42B) and Rubber Saddles (part #39B) inward. Do not hit or run over the Plates and Rubber Saddles, as this could damage the vehicle. Make sure the Car Lift is fully lowered before driving the vehicle off. **(See Figure A, and Assy. Diagram B.)**

12. **SHOULD ANY WEIGHT COMPONENT BE REMOVED FROM, OR ADDED TO THE VEHICLE, USE A JACK STAND (not provided) TO SUPPORT THE OVER BALANCED END DURING THE MAINTENANCE PROCEDURE.** Do not operate the Car Lift if the vehicle load tilts or binds during the up or down movement. Always position the vehicle with the center of gravity midway between the Rubber Saddles (part #39B). Avoid excessive rocking of the vehicle while it is in the raised position. **(See Figure A, and Assy. Diagram B.)**

13. **MAKE SURE TO READ AND UNDERSTAND ALL INSTRUCTIONS AND SAFETY PRECAUTIONS AS OUTLINED IN THE MANUFACTURER'S MANUAL FOR THE VEHICLE YOU ARE LIFTING.** All four Rubber Saddles (part #39B) of the Car Lift must be used when lifting a vehicle. Always use the vehicle manufacturer's recommended lifting points. **(See Figure A, and Assy. Diagram B.)**

14. **NEVER LIFT A VEHICLE WITH ANYONE INSIDE IT.** Do not allow others in the lift area while operating the Car Lift. Do not allow anyone to ride on the Car Lift while it is being raised or lowered.

15. **WHEN LIFTING A VEHICLE, RAISE THE RUBBER SADDLES (part #39B) SLOWLY UNTIL THE RUBBER SADDLES SECURELY CONTACT THE VEHICLE MANUFACTURER'S RECOMMENDED LIFTING POINTS.** Then, lift the vehicle to the desired working height. **CAUTION:** Always lift the vehicle high enough for the Safety Lock Assembly (part #36B) to operate properly. **(See Figure A, and Assy. Diagram B.)**

16. **DO NOT USE THE CAR LIFT AS A PERMANENT STAND FOR A VEHICLE.** Use the Car Lift only while making repairs. Then, immediately remove the vehicle from the Lift.

17. **BEFORE LOWERING THE CAR LIFT, MAKE SURE TOOL TRAYS, STANDS, AND ALL OTHER TOOLS AND EQUIPMENT ARE REMOVED FROM UNDER THE VEHICLE.**

18. **MAKE SURE TO SQUEEZE AND HOLD THE BRAKE LEVER (part #13B) IN BEFORE ATTEMPTING TO LOWER THE VEHICLE.** Do not release pressure on the Brake Lever until the Car Lift is completely lowered. **(See Figure B, and Assy. Diagram B.)**

19. **BEFORE REMOVING THE VEHICLE FROM THE CAR LIFT, MAKE SURE THE PLATES (part #42B) AND RUBBER SADDLES (part #39B) ARE MOVED IN TO PROVIDE AN UNOBSTRUCTED EXIT. (See Figure A, and Assy. Diagram B.)**

20. **THERE IS A WARNING LABEL ATTACHED TO THE CAR LIFT. READ AND FULLY UNDERSTAND THE CONTENTS OF THE WARNING LABEL. DO NOT REMOVE THE WARNING LABEL FROM THE CAR LIFT.**

21. **GROUND THIS PRODUCT.** This product requires the use of a UL approved, 220 Volt, grounded, 3-prong Electrical Power Plug (not provided). It is recommended that only a qualified electrician install the Power Plug. Never remove the grounding prong or modify the Power Plug in any way. Do not use adapter plugs with this product. To comply with the National Electric Code, and to provide additional protection from the risk of electrical shock, this product should only be connected to a 220 Volt, 3-hole electrical outlet that is protected by a Ground Fault Circuit Interrupter (GFCI). **(See Figure B.)**

22. **IF AN EXTENSION CORD (not provided) IS USED, MAKE SURE TO USE ONLY UL APPROVED CORDS HAVING THE CORRECT GAUGE AND LENGTH. (See Chart, next page.)**

23. **NOT TO BE USED FOR AIRCRAFT PURPOSES.**

Chart for 220 Voltage

REQUIRED MINIMUM EXTENSION CORD GAUGE – 240 VOLT				
NAMEPLATE AMPERES (At Full Load)	EXTENSION CORD LENGTH			
	0-25 Feet	25-50 Feet	50-100 Feet	100-150 Feet
6	18	16	14	12
8	18	16	12	10
10	18	14	12	10
12	16	14	10	8
14	16	12	10	8
16	16	12	10	8
18	14	12	8	8
20	14	12	8	6
22	14	10	8	6
24	14	10	8	6
26	12	10	8	6
28	12	10	6	4
30	12	10	6	4

24. **WARNING:** This product contains or produces a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). *(California Health & Safety Code 25249.5 et seq.)*

25. **WARNING:** People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

UNPACKING

When unpacking, check to make sure all the parts shown **on Parts List A** and **Parts List B** (pages 14, and 15) are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

ASSEMBLY INSTRUCTIONS

NOTE: For additional references to the parts listed below, refer to **Assembly Diagram A** and **Assembly Diagram B** (pages 14, and 15**).**

To Determine The Proper Car Lift Location:

1. **WARNING:** Do not use the Car Lift on any asphalt surface. Make sure this equipment is used on a dry, oil/grease free, flat, level, **CONCRETE** surface capable of supporting the weight of the Car Lift, the vehicle being lifted, and any additional tools and equipment. The concrete floor should have a minimum thickness of 5". The concrete must have a minimum strength of 4,000 PSI, and should be aged at least 30 days prior to use. Do not use the Car Lift on concrete expansion seams or on cracked, defective concrete.

2. Make sure to check the desired location for possible obstructions such as a low ceiling, overhead lines, adequate working area, access ways, exits, etcetera.

3. Make sure to allow a minimum space of 14 feet in front and behind the Car Lift to accommodate all vehicles. Certain allowances should be made for special vehicle requirements or unusual floor plans.

To Attach The Hydraulic Pump To The Car Lift:

1. Locate the Hydraulic Pump unit (parts #1A through #14A) in an area where it will be out of the way, is safe from damage and weather, and where it can be easily reached to operate. **(See Figure B, and Assy. Diagram A.)**

2. One end of the hydraulic Oil Pipe Connector (part #17B) has been pre-attached to the Car Lift by the manufacturer. To attach the remaining end of the hydraulic Oil Pipe Connector to the Hydraulic Pump, wrap the male threads of the Oil Pipe Connector with about 4" of pipe thread seal tape (not provided). Then, wrench tighten the Oil Pipe Connector into the threaded *Hydraulic Oil Delivery Port* located on the side of the Safety Valve Nut Cap (part #7A).
(See Figures A, B, and Assy. Diagram A.)

3. One end of the Brake Steel Cable (part #10B) has been pre-attached to the Car Lift by the manufacturer. The Brake Lever Assembly (part #13B) is located on the remaining end of the Brake Steel Cable, and must be attached to the arm of the Dolly (part #15B). To do so, slide the Brake Lever Assembly onto the arm of the Dolly. Then, secure the Brake Lever Assembly to the arm of the Dolly by tightening the Bolt (part #14B). **(See Figures A, B, and Assy. Diagram B.)**

To Fill The Oil Tank With Hydraulic Oil:

1. The Hydraulic Oil Tank (part #12A) has a holding capacity of 1.5 gallons of hydraulic oil. To fill the Oil Tank, squeeze and hold in the Brake Lever (part #13B) to release any load on the Car Lift. Remove the Oil Fill Cap on the Oil Tank. Add a premium quality hydraulic oil until the level of the oil is even with the Oil Fill Hole. Then, replace the Oil Fill Cap. **(See Figure B, and Assy. Diagram A.)**

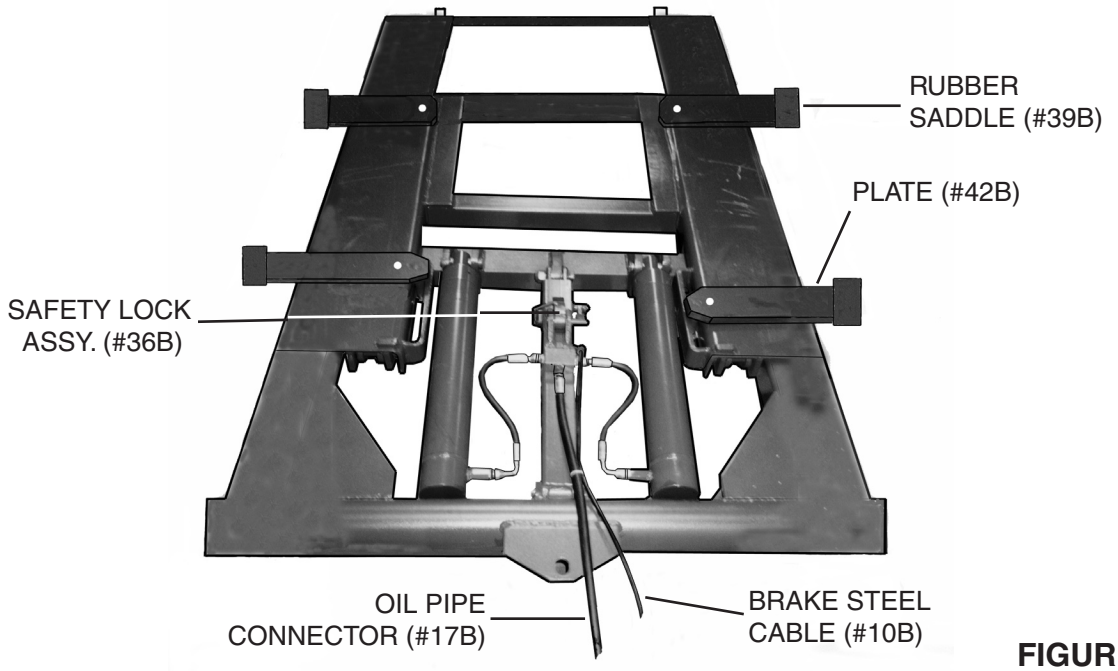


FIGURE A

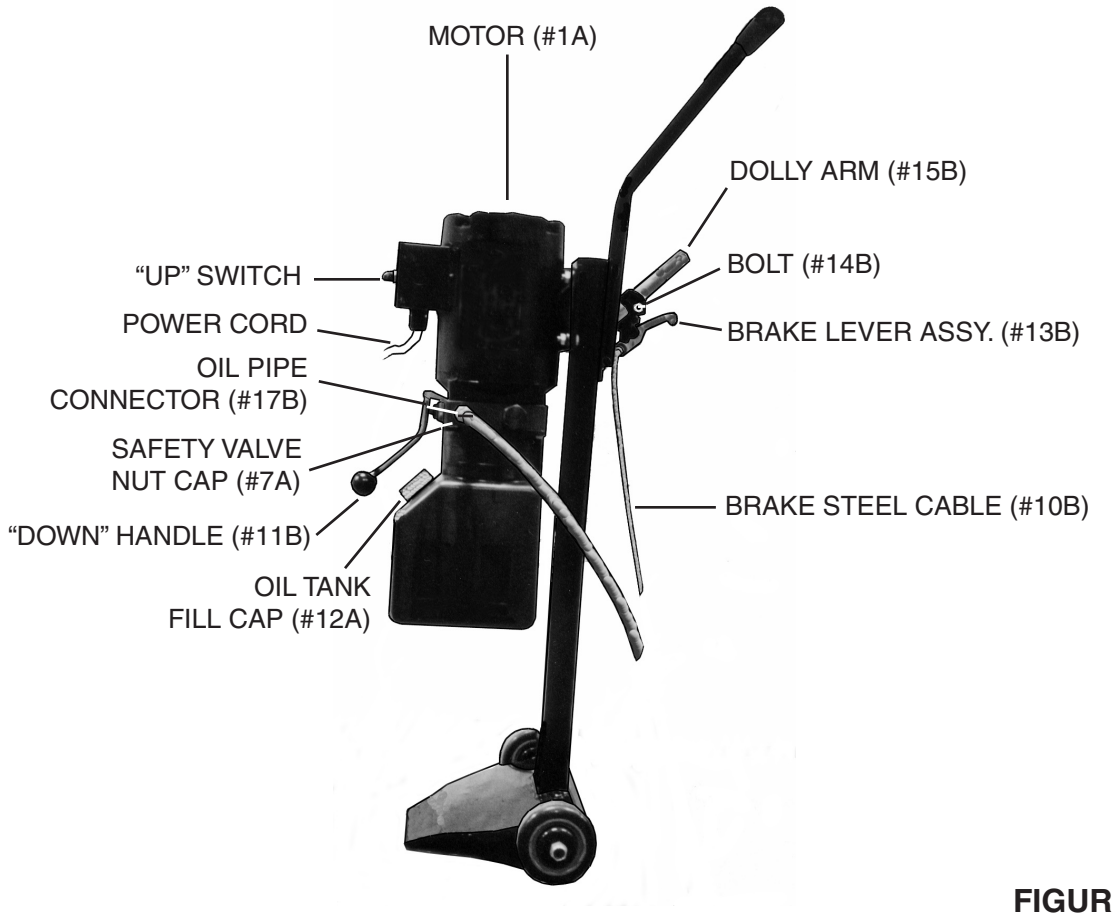


FIGURE B

OPERATING INSTRUCTIONS

To Check The Safety Lock Assembly:

1. **WARNING: Never operate the Car Lift if the Safety Lock Assembly (part #36B) is not working properly.**

2. Plug the Power Cord into a properly grounded, 3-hole, 220 Volt, electrical receptacle, and allow several seconds for the Motor (part #1A) to warm up. **(See Figure B, and Assy. Diagram A.)**

3. Squeeze and release the Brake Lever (part #13B) several times and, while doing so, observe that the Safety Lock Assembly (part #36B) operates properly in response to the Brake Lever. Then, release pressure on the Brake Lever. **(See Figures A, B, and Assy. Diagram B.)**

4. Press in on the "Up" Switch and hold, and observe that the Safety Lock Assembly (part #36B) "clicks" into place as the Car Lift rises. **NOTE:** There are *safety catches* on the Safety Lock Assembly as the Car Lift rises. Once the Safety Lock Assembly locks into each of these *safety catches,* you must squeeze and hold in on the Brake Lever (part #13B) to lower the Car Lift. **(See Figures A, B, and Assy. Diagrams A, and B.)**

5. Once the Car Lift is fully elevated, release pressure on the "Up" Switch. **(See Figure B, and Assy. Diagram A.)**

6. Without squeezing the Brake Lever (part #13B), press in on the "Down" Handle (part #11B) and hold. Observe that the Car Lift will not lower, as the Safety Lock Assembly (part #36B) is engaged. **CAUTION: If the Safety Lock Assembly does not engage, fully lower the Car Lift and have a qualified service technician immediately repair the Safety Lock Assembly.** **(See Figures A, B, and Assy. Diagrams A, and B.)**

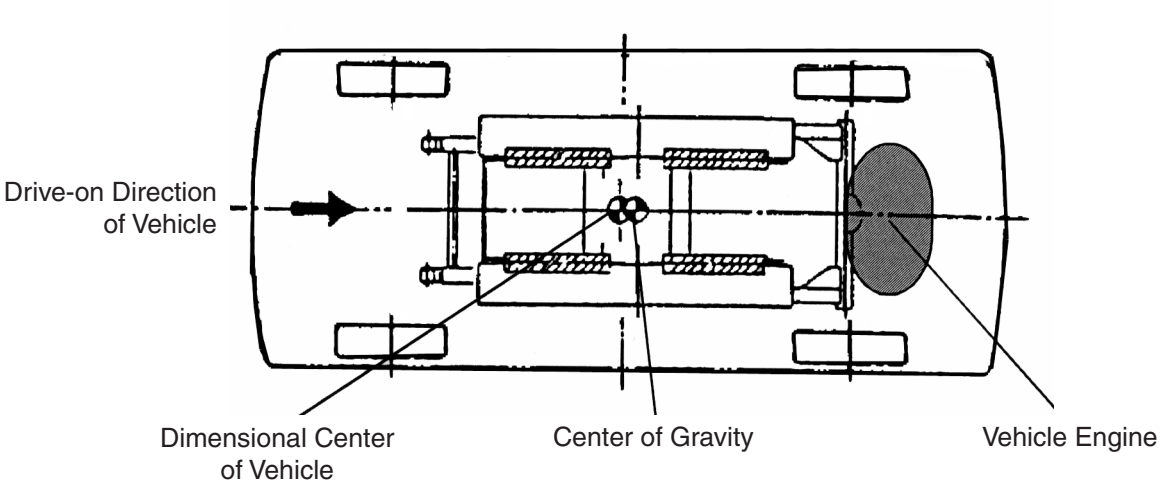
7. Should the Safety Lock Assembly (part #36B) not operate as described in Step #7, raise the Car Lift slightly to take pressure off the *safety catch*. Then, while squeezing the Brake Lever (part #13B), lower the Car Lift fully to the floor. **NOTE:** When working properly, you must BOTH squeeze in and hold the Brake Lever and press in and hold the "Down" Handle (part #11B) to lower the Car Lift.

To Position, Lift, and Lower The Vehicle On The Car Lift:

1. Before driving the vehicle onto the Car Lift, make sure that the Lift is fully lowered, and position the Plates (part #42B) and Rubber Saddles (part #39B) inward. **(See Figure A, and Assy. Diagram B.)**

2. Drive the vehicle over the Car Lift, while keeping the vehicle parallel with the Lift, and aligning the center of gravity of the vehicle with the center of the Lift. **NOTE:** The "Center of Gravity" (COG) of the vehicle is the "balance point" at which there is equal weight in front of and behind the COG, and equal weight on both sides of the COG. The COG is not necessarily the dimensional center of the vehicle, but is often slightly toward the engine from the dimensional center of the vehicle. **(See Figure C.)**

FIGURE C



3. Engage the parking brake of the vehicle.

4. Read the vehicle owner's manual to identify the recommended vehicle lifting points.

5. Move the Plates (part #42B) outward, and position the Rubber Saddles (part #39B) to contact the vehicle lifting points. **(See Figure A, and Assy. Diagram B.)**

6. **WARNING: Do not lift the vehicle if you cannot establish secure and level lifting points. Do not use substandard shims or other devices in place of approved and recommended Rubber Saddle (part #39B) adapters. Never use the Car Lift without the Rubber Saddles in place on each Plate (part #42B), and in contact with the lifting points of the vehicle.** **(See Figure A, and Assy. Diagram B.)**

7. Once the Rubber Saddles (part #39B) have been positioned under the vehicle lifting points, operate the “Up” Switch to lift the vehicle slightly, and test to make sure the vehicle is well balanced and the contact between the Rubber Saddles and vehicle lifting points are secure. Then, proceed to lift the vehicle to the desired height. **(See Figures A, B, and Assy. Diagrams A, and B.)**

8. **NOTE:** When the vehicle has been lifted to the desired height, and the Safety Lock Assembly (part #36B) has locked in place, make sure to install proper safety jack stands (not provided) under the vehicle while it is raised as an additional safety measure. **(See Figure A, and Assy. Diagram B.)**

9. Once the maintenance/repair to the vehicle is completed, make sure to remove all tools and materials from under the vehicle and Car Lift. Also, make sure the work area is clear and it is safe to lower the vehicle.

10. To lower the Car Lift, use the “Up” Switch, and raise the vehicle slightly to take weight off the Safety Lock Assembly (part #36B). Remove safety jack stands. Then, release pressure on the “Up” Switch. **(See Figures A, B, and Assy. Diagrams A, and B.)**

11. Stand well away from the Car Lift and vehicle. Then squeeze and hold in the Brake Lever (part #13B) while, at the same time, pushing in and holding the “Down” Handle (part #11B) to slowly lower the vehicle to the ground. With the vehicle securely on the ground, lower the Car Lift all the way to the floor. **(See Figure B, and Assy. Diagram A.)**

12. Move the Plates (part #42B) and Rubber Saddles (part #39B) inward, out of the path of the vehicle. **(See Figure A, and Assy. Diagram B.)**

13. Disengage the vehicle parking brake, and drive the vehicle out slowly and carefully.

INSPECTION, MAINTENANCE, AND CLEANING

1. **CAUTION:** Always release a load from the Car Lift and disconnect the Lift from its electrical power source before performing any inspection, maintenance, or cleaning.

2. **BEFORE EACH USE,** inspect the general condition of the Car Lift. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged hydraulic hoses or electrical wiring, rusted, bent, or frayed Brake Steel Cable and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. **Do not use damaged equipment.**

3. **Bleeding the Hydraulic System.** If you notice deteriorating performance of the Pump, it may be a result of too much air in the system.
To bleed the system:
    1. Remove cap from the oil tank.
    2. Raise and lower the lift through its full range a few times (air will escape).
    3. Add hydraulic oil, if necessary to top off the tank, and replace the oil tank cap.

4. **PRIOR TO OPERATING THE CAR LIFT,** inspect the hydraulic oil level in the Oil Tank (part #12A). To do so, squeeze and hold in the Brake Lever (part #13B) to release any load on the Car Lift. Remove the Oil Fill Cap on the Oil Tank. Add a premium quality hydraulic oil until the level of the oil is even with the Oil Fill Hole. Then, replace the Oil Fill Cap. **(See Figure B, and Assy. Diagram A.)**

5. **PERIODICALLY,** use a premium quality, lightweight oil to lubricate all moving parts. Use a premium quality, heavy weight grease to lubricate the Cylinder Pins (part #31B), Scissors Pins (part #23B), Wheel Pins (parts #26B, #29B), Cylinder Assemblies (part #35B), Saddle Holders (part #38B), and Plates (part #42B). **(See Assy. Diagram B.)**

6. With a soft brush, soft cloth, or vacuum, remove all debris from the Car Lift.

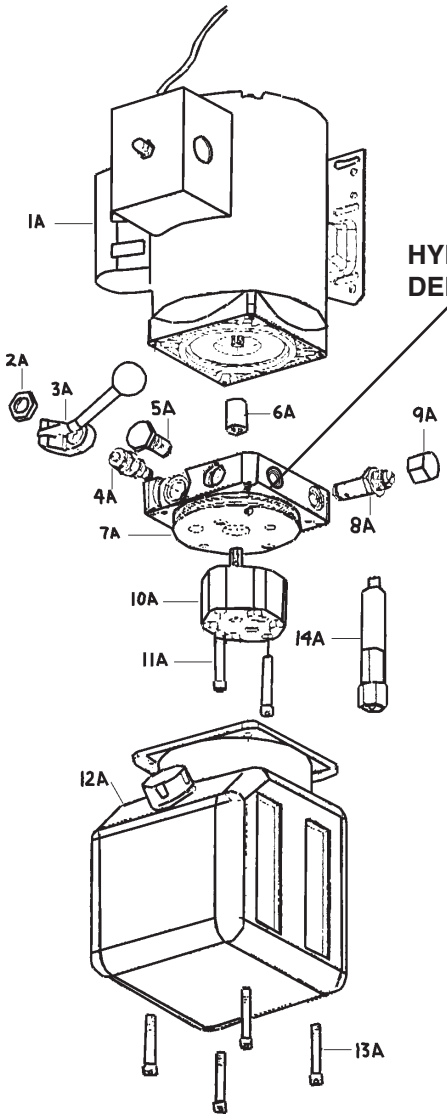
7. When necessary, wipe with a damp cloth, using a mild detergent or mild solvent.

8. When storing, keep the Car Lift covered with a clean cloth.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

ASSEMBLY DIAGRAM "A" / PARTS LIST "A"



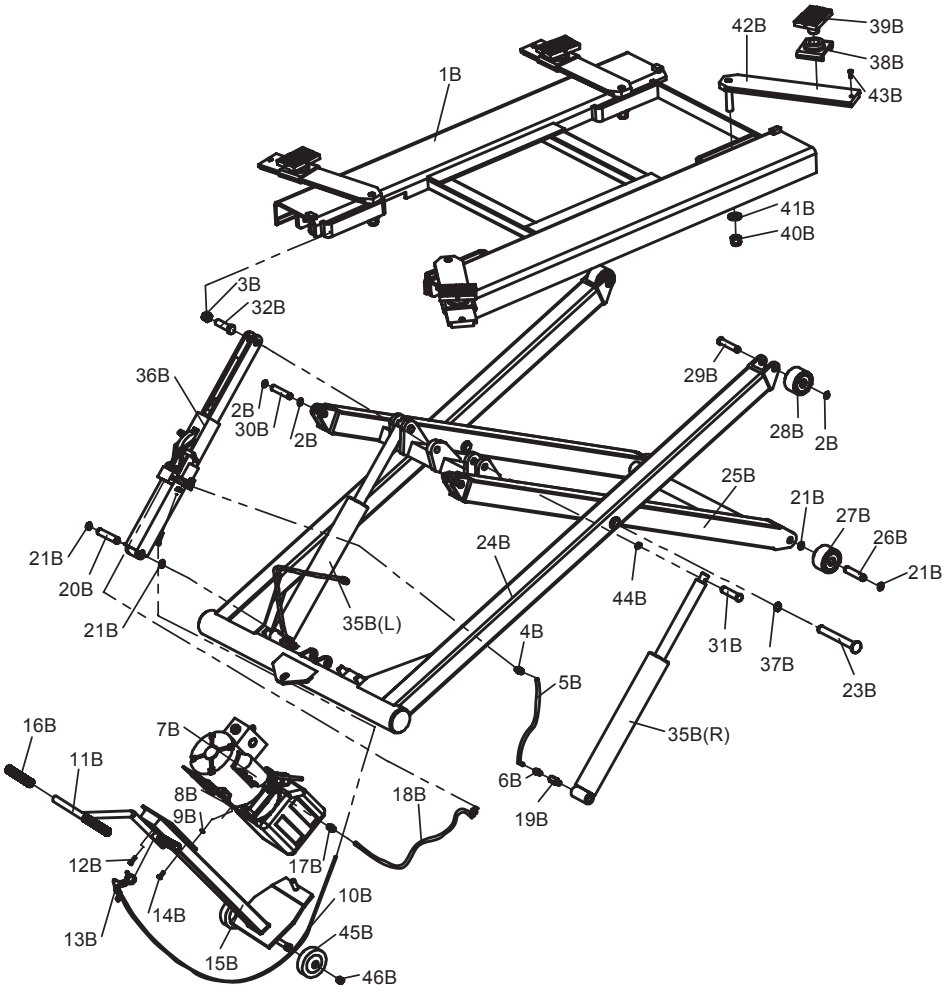
Part #	Description	Qty.
1A	Motor	1
2A	Nut (M20 x 1.5)	1
3A	Pressure Release Valve Handle	1
4A	Release Valve Assembly	1
5A	Check Valve Assembly	1
6A	Gear Bearing Cap	1
7A	Safety Valve Nut Cap	1
8A	Safety Valve Assembly	1
9A	Valve Seat	1
10A	Gear Pump	1
11A	Bolt	2
12A	Oil Tank	1
13A	Bolt	4
14A	Bumper Assembly	1

NOTE; Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

PARTS LIST “B”

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
1B	Table	1	24B	Outer Scissor	1
2B	Retaining Ring (18)	6	25B	Inner Scissor	1
3B	Locking Nut (M20)	1	26B	Wheel Pin	2
4B	Oil Pipe Connector (2)	3	27B	Big Wheel	2
5B	Branch Inlet Pipe	2	28B	Small Wheel	2
6B	Oil Pipe Connector (2)	2	29B	Wheel Pin	2
7B	Oil Supply Fitting	1	30B	Connecting Pin	2
8B	Nut (M8)	4	31B	Cylinder Pin	2
9B	Washer (8)	4	32B	Safety Lock Pin	1
10B	Brake Steel Cable	1	35B	Cylinder Assy. (L/R)	2
11B	“Down” Handle	1	36B	Safety Locking Assy	1
12B	Hex Screw (M8)	4	37B	Retaining Ring (24)	2
13B	Brake Lever Assy	1	38B	Saddle Holder	4
14B	Bolt (M8)	4	39B	Rubber Saddle	4
15B	Dolly	1	40B	Locking Nut	4
16B	Rubber Cap	3	41B	Washer (20)	4
17B	Oil Pipe Connector (1)	1	42B	Plate	4
18B	General Inlet Pipe	1	43B	Bolt (M8x20)	4
19B	Check Valve	2	44B	Ring (15)	2
20B	Safety Lock Pin	1	45B	Wheel	2
21B	Retaining Ring (20)	6	46B	Nut	2
23B	Scissor Pin	2			

ASSEMBLY DIAGRAM “B”

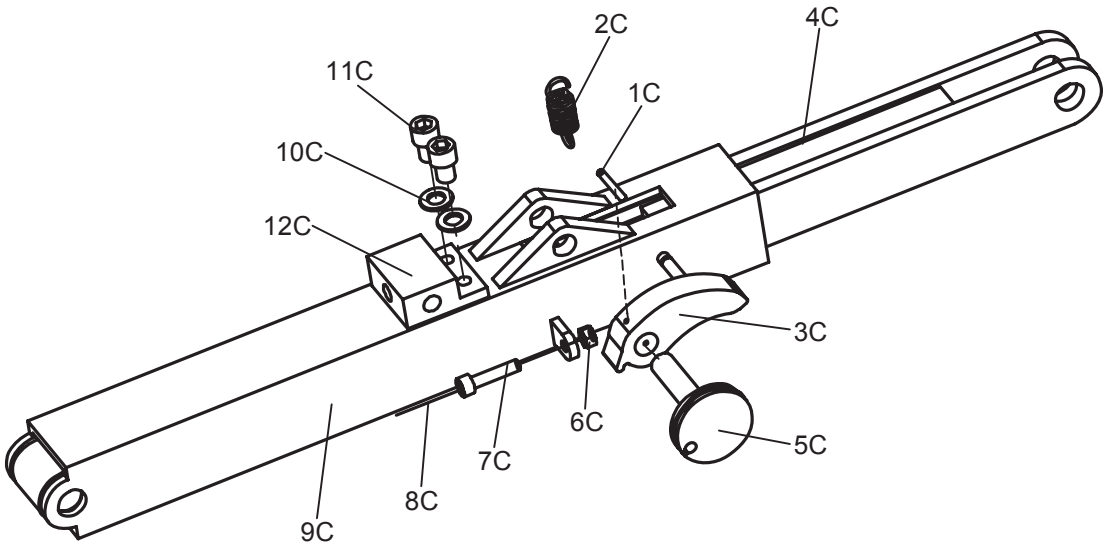


NOTE: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

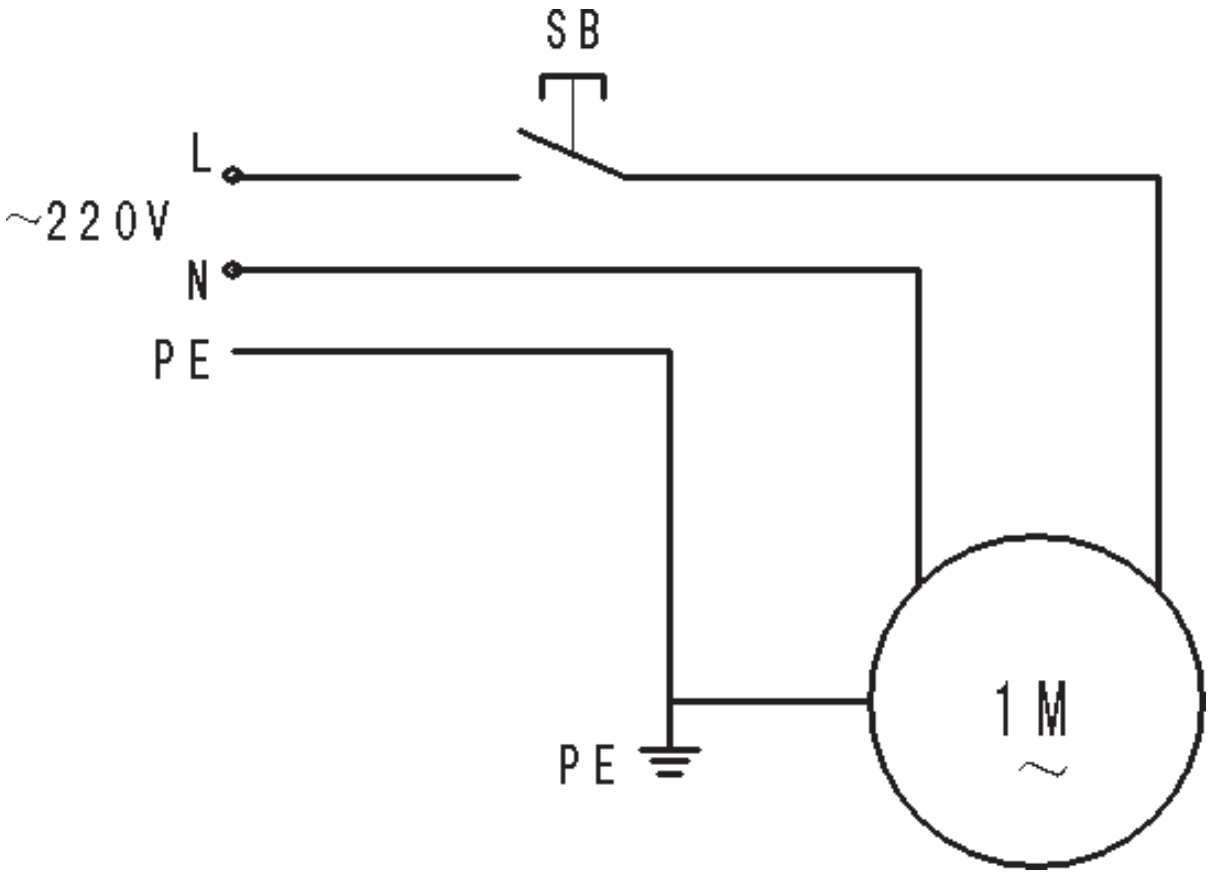
REV 06h, 07c

ASSEMBLY DIAGRAM “C” / PARTS LIST “C”

PART	DESCRIPTION	QTY	PART	DESCRIPTION	QTY
1C	Pin	1	7C	Bolt (M8)	1
2C	Spring	1	8C310B	Brake Wire Cable	1
3C	Lock Block	1	9C	Lock Sheath	1
4C	Lock Pole	3	10C	Washer (12)	1
5C	Lock Wheel	1	11C	Bolt (M12)	1
6C	Nut (M8)	1	12C	Check Valve	1



SCHEMATIC



LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

3491 Mission Oaks Blvd. • PO Box 6009 • Camarillo, CA 93011 • (800) 444-3353